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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Rupert Maier

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HARNESS, DICKEY & PIERCE, P.L.C.

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EXAMINER

MAI, KEVIN S

ART UNIT

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MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/655,023	Applicant(s) MAIER ET AL.	
	Examiner KEVIN S. MAI	Art Unit 2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Office Action has been issued in response to Applicant's Amendment filed July 10, 2009.
2. Claims 1, 3, 9-11, 13, 15, 16 and 21-26 have been amended. Claims 1-26 have been examined and are pending.

Response to Arguments

3. Applicant's arguments filed July 10, 2009 have been fully considered but they are not persuasive.
4. Applicant's arguments with respect to the claim objection have been considered but they are not persuasive. Applicant disagrees with the interpretation given in the previous claim objection and have amended the claims to distinctly claim the subject matter regarded as the invention. Stating that support for these amendments appear in at least figure 3 and paragraph [0028] of the published application. Examiner disagrees. While the claim objection has been withdrawn due to the amendments, it appears that the invention the applicant is attempting to claim is not supported by the specification and in fact the cited portions appear to support examiners interpretation. Paragraph [0028] of applicant's published application states "the master sends a message to all the network nodes in the subnetwork which it is to synchronize instructing the nodes not to send any more messages without a request until further notice." This would indicate that after the nodes are told not to send messages, they would only send messages in response to a request. This request is seen to come from the master. To the examiner this interpretation is clear from the cited paragraph, however to further support this interpretation

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paragraph [0031] of applicant's published application states "the master of the subnetwork sends a delay-time measurement message to every network node in the subnetwork. Each individual network node is successively addressed and requested to send an acknowledgement to the master immediately." Accordingly it is seen that it is the master that is sending requests and furthermore that the other nodes do not send messages without a request from the master.

5. Applicant's arguments with respect to claim 1 have been considered but they are not persuasive. Applicant argues that there is no prior request to the central switch from any of the Rawson nodes and that Rawson fails to teach of fairly suggest "by instructing the network nodes not to send any message to the master without a prior request". Examiner disagrees. Rawson does not need to disclose a prior request to the central switch from any of the nodes because applicant's invention does not contain this feature. At the very least the current claim language does not limit itself to the interpretation that the referenced "prior request" is from the nodes to the master. However, beyond that, applicant's specification does not support such a limitation. There is no indication in applicant's specification that it is the nodes other than the master that send the requests. The cited paragraph actually indicates otherwise.

6. Paragraph [0028] of applicant's published application states "the master sends a message to all the network nodes in the subnetwork which it is to synchronize instructing the nodes not to send any more messages without a request until further notice." This would indicate that after the nodes are told not to send messages, they would only send messages in response to a request. This request is seen to come from the master. To the examiner this interpretation is clear from the cited paragraph, however to further support this interpretation paragraph [0031] of applicant's published application states "the master of the subnetwork sends a delay-time measurement

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message to every network node in the subnetwork. Each individual network node is successively addressed and requested to send an acknowledgement to the master immediately." Accordingly it is seen that it is the master that is sending requests and furthermore that the other nodes do not send messages without a request from the master. These appear to be the only paragraphs in applicant's specification that use the word 'request' and it would appear that both of them indicate it is the master that is sending the requests.

7. Thus applicant's assertion that there is no prior request to the central switch from any of the Rawson nodes is seen to be directed toward subject matter not in applicant's specification. Furthermore applicant's argument that Rawson fails to teach of fairly suggest "by instructing the network nodes not to send any message to the master without a prior request" is similarly directed toward subject matter not in applicant's specification. Examiner's previous rejection is seen to disclose the subject matter that appears to be supported by applicant's specification.

8. Applicant's arguments with respect to the remaining claims are the same as those used for claim 1. As such, examiner recites the same rationale used above.

Claim Objections

9. In view of the amendments made the pending claim objections have been withdrawn.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1, 2, 4-8, 12, 14, 16, 17, 19, 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 6351821 to Voth (hereinafter "Voth") and further in view of US Pat. No. 6687756 to Rawson, III (hereinafter "Rawson").

13. **As to Claim 1, Voth discloses a method for synchronizing network nodes in a subnetwork, where the network nodes have timers and at least one of the network nodes undertakes the function of a master, the time on the master being used as a reference time for the subnetwork, the method comprising:**
[insuring no unauthorized communication takes place in the subnetwork by instructing the network nodes not to send any message to the master without a prior request]
sending a delay-time measurement message to every network node in the subnetwork in order to ascertain a signal delay time (Figure 6 of Voth discloses sending a SYNC message to the slave nodes (602));

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sending a time setting message to every network node (Figure 6 of Voth discloses sending an INFO message to the slave nodes (624); **and**

aligning the time on the network nodes with the reference time for the subnetwork (Figure 6 of Voth discloses the slave nodes receiving the INFO message (626) and then scheduling their time adjustments),

wherein each of the first three method steps are performed my by the master (Figure 6 of Voth discloses the master node performing those steps).

Voth does not explicitly disclose **insuring no unauthorized communication takes place in the subnetwork by instructing the network nodes not to send any message to the master without a prior request to the master.**

However, Rawson discloses this (Column 2 lines 1-25 of Rawson disclose prior to reading the time base register values packet traffic among the set of nodes is halted by broadcasting a halt traffic packet. Then the time base register values are retrieved from each of the set of nodes, these are seen to be requests from the head. Thus it is seen that the nodes do not send any messages without a request from the head)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine clock synchronization as disclosed by Voth, with halting normal packet traffic as disclosed by Rawson. One of ordinary skill in the art would have been motivated to combine because it makes it possible to transmit synchronization packets with a deterministic time delay (Column 4 lines 50-60 of Rawson). Furthermore it is seen that since the two invention are directed toward synchronization and as such it would also be use a known technique to improve similar devices in the same way.

14. **As to Claim 2**, Voth-Rawson discloses the invention as claimed as described in claim 1, **further comprising storing the signal delay time for the network nodes in the master** (Column 11 lines 55-60 of Voth disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. Figure 10 discloses that this repository contains entries for max delay (1016), min delay (1018) and average delay (1020)).

15. **As to Claim 4**, Voth-Rawson discloses the invention as claimed as described in claim 1, **wherein the time on a network node is aligned with the reference time for the subnetwork immediately after reception of the time setting message** (Column 8 lines 20-25 of Voth disclose that on receipt of the INFO message the slave node uses the mark time field in the message to schedule the time at which the time clock will be updated. It is seen that it would have been obvious for the mark time field to be set in such a fashion that the scheduled time to update would be immediately upon receipt of the message itself. Since the time at which to update the time clock is modifiable, having the time to update be the time of reception is an obvious variant for a system that wishes to make the synchronization process take as little time as possible).

16. **As to Claim 5**, Voth-Rawson discloses the invention as claimed as described in claim 1, **wherein the time on a network node is aligned with the reference time for the subnetwork by way of a step-by-step basis** (Column 3 lines 10-15 of Voth disclose large adjustments in time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

17. **As to Claim 6**, Voth-Rawson discloses the invention as claimed as described in claim 1, **wherein at least one step is repeated a plurality of times** (Column 2 lines 50-55 of Voth disclose that the system uses a repeating update cycle. Thus it is seen that all steps are repeated a plurality of times).

18. **As to Claim 7**, Voth-Rawson discloses the invention as claimed as described in claim 6, **wherein the master ascertains the signal delay time by sending a plurality of delay-time measurement messages and using formation of a mean** (Column 13 lines 23-50 of Voth disclose that the master node updates the delay variables each time it receives a SYNC message. Then since SYNC message are sent every cycle it is seen that the delay-time is ascertained through a plurality of measurement messages. As to a mean being formed, column 13 line 45 discloses the formation of the average delay variable).

19. **As to Claim 8**, Voth-Rawson discloses the invention as claimed as described in claim 1, **wherein the master ascertains all the network nodes which are part of the subnetwork** (Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

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20. **As to Claim 12**, Voth-Rawson discloses the invention as claimed as described in claim 2, **wherein the time on a network node is aligned with the reference time for the subnetwork immediately after reception of the time setting message** (Column 8 lines 20-25 of Voth disclose that on receipt of the INFO message the slave node uses the mark time field in the message to schedule the time at which the time clock will be updated. It is seen that it would have been obvious for the mark time field to be set in such a fashion that the scheduled time to update would be immediately upon receipt of the message itself. Since the time at which to update the time clock is modifiable, having the time to update be the time of reception is an obvious variant for a system that wishes to make the synchronization process take as little time as possible).

21. **As to Claim 14**, Voth-Rawson discloses the invention as claimed as described in claim 2, **wherein the time on a network node is aligned with the reference time for the subnetwork by way of a step-by-step basis** (Column 3 lines 10-15 of Voth disclose large adjustments in time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

22. **As to Claim 16**, Voth-Rawson discloses the invention as claimed as described in claim 4, **wherein the time on the network node is aligned with the reference time for the subnetwork by way of a step-by-step basis** (Column 3 lines 10-15 of Voth disclose large adjustments in time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

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23. **As to Claim 17**, Voth-Rawson discloses the invention as claimed as described in claim 2, **wherein the master ascertains all the network nodes which are part of the subnetwork**

(Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

24. **As to Claim 19**, Voth-Rawson discloses the invention as claimed as described in claim 4, **wherein the master ascertains all the network nodes which are part of the subnetwork**

(Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

25. **As to Claim 20**, Voth-Rawson discloses the invention as claimed as described in claim 5, **wherein the master ascertains all the network nodes which are part of the subnetwork**

(Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

26. **As to Claim 26**, Voth discloses **a method, comprising:**

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[insuring no unauthorized communication takes place in a subnetwork by instructing the network nodes not to send any message to s master without a prior request]

sending a delay-time measurement message to every network node in the subnetwork in order to ascertain a signal delay time (Figure 6 of Voth discloses sending a SYNC message to the slave nodes (602));

sending a time setting message to every network node (Figure 6 of Voth discloses sending an INFO message to the slave nodes (624); **and**

aligning the time on the network nodes with a reference time for the subnetwork (Figure 6 of Voth discloses the slave nodes receiving the INFO message (626) and then scheduling their time adjustments).

Voth does not explicitly disclose **insuring no unauthorized communication takes place in a subnetwork by instructing the network nodes not to send any message to s master without a prior request.**

However, Rawson discloses this (Column 2 lines 1-25 of Rawson disclose prior to reading the time base register values packet traffic among the set of nodes is halted by broadcasting a halt traffic packet. Then the time base register values are retrieved from each of the set of nodes, these are seen to be requests from the head. Thus it is seen that the nodes do not send any messages without a request from the head)

Examiner recites the same rationale to combine used in claim 1.

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27. Claims 3, 11, 13, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voth-Rawson and further in view of US Pat. No. 6973622 to Rappaport et al. (hereinafter “Rappaport”).

28. **As to Claim 3**, Voth-Rawson discloses the invention as claimed as described in claim 1. Voth-Rawson does not explicitly disclose **wherein a network node, upon receiving the delay-time measurement message, simulates the alignment of a time thereof with the reference time at least once, and then sends a response to the master.**

However, Rappaport discloses this (Column 23 lines 9-26 of Rappaport disclose finding the processing delays associated with each device in the network. Where processing delay is the time required for the network device to process data sent to it. This is seen to be the same as measuring delay by simulating the action because it is also measuring the processing delay of a device)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the method of claim 1 as disclosed by Voth-Rawson, with simulating the process of time alignment as disclosed by Rappaport. One of ordinary skill in the art would have been motivated to combine to accurately predict round trip time of packets sent in the network (Column 23 lines 42-46 of Rappaport). Since synchronization relies highly on compensating for delay it would have been obvious to also account for the delay involved in actually processing the time alignment request)

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29. **As to Claim 11**, Voth-Rawson discloses the invention as claimed as described in claim 2. Voth-Rawson does not explicitly disclose **wherein a network node, upon receiving the delay-time measurement message, simulates the alignment of a time thereof with the reference time at least once, and then sends a response to the master.**

However, Rappaport discloses this (Column 23 lines 9-26 of Rappaport disclose finding the processing delays associated with each device in the network. Where processing delay is the time required for the network device to process data sent to it. This is seen to be the same as measuring delay by simulating the action because it is also measuring the processing delay of a device)

Examiner recites the same rationale to combine used in claim 3.

30. **As to Claim 13**, Voth-Rawson-Rappaport discloses the invention as claimed as described in claim 3, **wherein the time on the network node is aligned with the reference time for the subnetwork immediately after reception of the time setting message** (Column 8 lines 20-25 of Voth disclose that on receipt of the INFO message the slave node uses the mark time field in the message to schedule the time at which the time clock will be updated. It is seen that it would have been obvious for the mark time field to be set in such a fashion that the scheduled time to update would be immediately upon receipt of the message itself. Since the time at which to update the time clock is modifiable, having the time to update be the time of reception is an obvious variant for a system that wishes to make the synchronization process take as little time as possible).

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31. **As to Claim 15**, Voth-Rawson-Rappaport discloses the invention as claimed as described in claim 3, **wherein the time on the network node is aligned with the reference time for the subnetwork by way of a step-by-step basis** (Column 3 lines 10-15 of Voth disclose large adjustments in time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

32. **As to Claim 18**, Voth-Rawson-Rappaport discloses the invention as claimed as described in claim 3, **wherein the master ascertains all the network nodes which are part of the subnetwork** (Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

33. Claims 9, 21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voth-Rawson and further in view of US Pat. No. 6157957 to Berthaud (hereinafter “Berthaud”).

34. **As to Claim 9**, Voth-Rawson discloses the invention as claimed as described in claim 1. Voth-Rawson does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork**.

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

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It would have been obvious to one of ordinary skill in the art at the time of invention to combine the method of claim 1 as disclosed by Voth-Rawson, with having a slave be a master of other slaves as disclosed by Berthaud. One of ordinary skill in the art would have been motivated to combine to make the system not reliant on a particular hierarchical organization (Column 4 lines 35-50 of Berthaud).

35. **As to Claim 21**, Voth-Rawson discloses the invention as claimed as described in claim 2. Voth-Rawson does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

36. **As to Claim 23**, Voth-Rawson discloses the invention as claimed as described in claim 4. Voth-Rawson does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

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37. **As to Claim 24**, Voth-Rawson discloses the invention as claimed as described in claim 5.

Voth-Rawson does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

38. **As to Claim 25**, Voth-Rawson discloses the invention as claimed as described in claim 8.

Voth-Rawson does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

39. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voth-Rawson and further in view of US Pub. No. 2003/0158971 to Renganarayanan et al. (hereinafter “Renganarayanan”).

40. **As to Claim 10**, Voth-Rawson discloses the invention as claimed as described in claim 1.

Voth-Rawson does not explicitly disclose **wherein the network nodes in the subnetwork are connected to one another by way of an optical transmission medium.**

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However, Renganarayanan disclose this (Paragraph [0049] of Renganarayanan discloses generally networks are connected via optical fiber, coaxial cable and twisted pair connections)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the method of claim 1 as disclosed by Voth-Rawson, with using optical fibers as disclosed by Renganarayanan. One of ordinary skill in the art would have been motivated to combine because it is seen that it is generally known that networks are connected via optical fibers and as such it would have been obvious to use them to connect the network disclosed in Voth-Rawson.

41. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voth-Rawson-Rappaport and further in view of Berthaud.

42. **As to Claim 22**, Voth-Rawson-Rappaport discloses the invention as claimed as described in claim 3. Voth-Rawson-Rappaport does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

Conclusion

43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6324586 B1 - System for synchronizing multiple computers with a common timing reference to Johnson; Aric R.

US 20050210153 A1 - Method and apparatus for time synchronization in a network data processing system to Rich, Bruce Arland et al.

US 20050033862 A1 - Method for synchronization in networks to Blum, Philipp et al.

US 20030172179 A1 - System and method for performing clock synchronization of nodes connected via a wireless local area network to del Prado Pavon, Javier et al.

US 20030154309 A1 - Method for synchronizing computer clocks in networks used for information transmission, device for carrying out said method and data packet suitable for the synchronization of computer clocks to Kero, Nikolaus et al.

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US 20020073228 A1 - Method for creating accurate time-stamped frames sent between computers via a network to Cognet, Yves et al.

US 7281061 B2 - Time managing apparatus for managing time to synchronize with other apparatuses to Takeda; Hideyuki

US 7260653 B2 - Method and device for the synchronization between two networks to Le Scolas; Lionel et al.

US 6535926 B1 - Time synchronization system for industrial control network using global reference pulses to Esker; Lawrence W.

US 6134234 A - Master-slave synchronization to Kapanen; Jouko Juhani

US 5907685 A - System and method for synchronizing clocks in distributed computer nodes to Douceur; John R.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN S. MAI whose telephone number is (571)270-5001. The examiner can normally be reached on Monday through Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. S. M./
Examiner, Art Unit 2456

/Bunjod Jaroenchonwanit/
Supervisory Patent Examiner, Art Unit 2456